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School, and C. A. Hibbard (chairman) of the University of North Carolina.

This committee is now at work on their report which they are to present at the next annual meeting of the council. It seems likely that the report will be simplified as much as possible under such general topics as: spelling, capitalization, punctuation, sentence structure, diction, grammar, and manuscript preparation.

In order that this report may be as representative as possible the committee is anxious to hear from all of the teachers in the state in grade or high school or college. It is their desire to hear from every one interested in this problem. Once the report is accepted by the council it is hoped that it will be published and placed in the hands of every teacher of English in the state.

The chairman asks THE HIGH SCHOOL JOURNAL to bespeak communications on this subject from all teachers interested in the question of minimum essentials in English.—C. A. H.

THE ORIGIN OF SOME PROBLEMS IN ALGEBRA

By W. W. RANKIN
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PERHAPS it is worth while for the student of algebra to know the source of some of his troubles. What seems "dry" and uninteresting might be appreciated if presented in its proper historical setting. Not long after he begins to study algebra he will likely meet with the "tank" problems, the "labor" problems and many other puzzle problems. He finds these problems carefully phrased in the language of practical mathematics. However, a study of the original problems and the fanciful way in which they were stated will reveal the fact that they were originally intended mostly for puzzles. The present-day student of algebra would doubtless work as industriously over the so-called practical problems if he were told they were puzzle problems that his predecessors had worked on for the past 1600 years.

The problems given below are selected from a collection made by Metrodorus about 310 A. D. found in Greek Anthology. It is not known how much farther back they date. It will not be difficult for the reader to trace many of the problems found in the present-day algebras back to their original source. He may judge for himself as to whether the modern text-book writer has improved the problems by leaving off the little fanciful touches of rhetoric, found in the original.

The original problems were solved by rhetorical algebra as our symbols, $+$, $-$, $=$, x , y , etc., were introduced many centuries later, about 1540.

We three Loves stand here pouring out water for the bath, sending streams into the fair-flowing tank. I on the right, from my long-winged feet, fill it in the sixth part of a day; I on the left, from my jar, fill it in four hours; and I in the middle, from my bows in just half a day. Tell me in what a short time we should fill it, pouring water from wings, bows, and jar all at once. (Answer 1-11 of a day.)

This is Polyphemus the brazen Cyclops, and as if on him someone made an eye, a mouth, and a hand, connecting them with pipes. He looks quite as if he were dripping water and seems also to be spouting it from his mouth. None of the spouts are irregular; that from his hand when running will fill the cistern in three days only, that from his eye in one day, and his mouth in two-fifths of a day. Who will tell me the time it takes when all three are running? (Answer 6-23 of a day.)

Brick-makers, I am in a great hurry to erect this house. To-day is cloudless and I do not require many more bricks, but I have all I want but three hundred. Thou alone in one day couldst make as many, but thy son left off working when he had finished two hundred, and thy son-in-law when he had made two hundred and fifty. Working all together, in how many days can you make these? (Answer—2-5 of a day.)

Diodorus, great glory of dial-makers, tell me the hour since when the golden wheels of the sun leapt up from the east to the pole. Four times three-fifths of the distance he has traversed remain until he sinks to the western sea. (Answer 3 and 9-17 had passed, and 8 and 8-17 remained.)

Cypris thus addressed Love, who was looking down-cast: "How my child, hath sorrow fallen on thee?" And he answered: "The Muses stole and divided among themselves, in different proportions, the apples I was bringing from Helicon, snatching them from my bosom. Clio got the fifth part, Euterpe the twelfth, but divine Thalia the eighth. Melpomene carried off the twentieth part, and Terpsichore the fourth, and Erato the seventh; Polyhymnia robbed me of thirty apples, and Urania of a hundred and twenty, and Calliope went off with a load of three hundred apples. So I came to thee with lighter hands, bringing these fifty apples that the goddesses left me. (Answer—Love had 3,360 apples.)

Make me a crown weighing sixty minae, mixing gold and brass and with them tin and much-wrought iron. Let the gold and the bronze together form two-thirds, the gold and the tin together three-fourths, and the gold and iron three-fifths. Tell me how much gold

you must put in, how much brass, how much tin, and how much iron, so as to make the whole crown weigh sixty minae. (Answer: Gold $30\frac{1}{2}$, brass $9\frac{1}{2}$, tin $14\frac{1}{2}$, iron $5\frac{1}{2}$.)

Arise Work-women it is past dawn; a fifth part of three-eighths of what remains is gone by. (Answer 36-45 of an hour had gone by.)

A give me ten minas and I become three times as much as you. B and if I get the same from you I am five times as much as you. (Answer—A = 15 5-7 B = 18 4-7.)

DEVELOPING SCHOOL SPIRIT AND CORRECT ATTITUDE AT TARBORO

By JOHN M. SHIELDS

THE TARBORO Graded School is giving every encouragement to scholastic achievement, but it is placing even more emphasis upon the development of school spirit and correct attitudes. The school believes that by stimulating school spirit and proper habits of thought and action on the part of the pupils toward their work, conduct, fellow-students, and their teachers, it will lay the surest foundation for high achievement in scholarship. It believes that spirit and principle are primary; knowledge, secondary; for the constant presence of spirit and principle will inevitably react on the pupil in such a way that he will voluntarily acquire whatever knowledge may be necessary for his success. On the other hand knowledge without spirit and principle is worthless. I shall mention a few of the methods and devices the school is using to achieve its objects.

In order to encourage the right attitude toward the habits of punctuality and attendance, the school has been giving a half holiday each month to every class that has no tardies and not over $2\frac{1}{2}\%$ absences for that month. This plan resulted last year in reducing tardies from 130 for September to 15 for March.

A healthy and stimulating rivalry among the grades has been developed in various ways. From time to time spelling and reading contests have been held. In these contests representatives from the primary grades were pitted against each other, then similar matches were held for the grammar grades, and spelling matches were given for the high school classes. A pronouncing match between two of the high school grades is now under preparation. Practically all of the classes above the primary grades have elected class officers and adopted mottoes. Several of the grades have their own class songs, written by the pupils with the assistance

of their teachers. These songs are always sung with zest and enthusiasm. Whenever the pupils are called upon to sell tickets for an athletic contest or some entertainment, class rivalry is fostered by offering a prize to the banner grade. One section of the second grade sold tickets valued at \$33.00 for the University Glee Club concert, and the ninth grade took in \$69.75 for a local play last month.

Probably the best plan used to stimulate class and school spirit is that of having each class keep written records of the creditable and discreditable things done by its members. In the credit column are placed such items as these: Five pupils get on honor roll for month; two pupils make triangular debate; four boys enter declamation contest; class raises funds to buy picture; member of class voluntarily remains after school to do typewriting for teacher. The debit column contains entries of this character: Class takes little pride in keeping room neat; three pupils failed on their work; two pupils were tardy; one pupil threw paper on school grounds; seven pupils were punished for misconduct. The class making the best record under this system will be awarded a prize at the end of the year.

The school uses monthly report forms designed as a means of fostering both high scholarship and commendable attitudes. In lieu of the old-fashioned report card indicating the standing of pupils by marks separate sheets are used for comments on scholarship and conduct. On the scholarship sheet the teacher classifies the pupil as "average," "slightly above average," "considerably above average," "slightly below average" or "considerably below average." She then writes, in space provided below, comments on the pupil's work, pointing out both his strong and weak points. The sheet for conduct is used by the teacher to commend the pupil for his admirable attitude, school loyalty, etc., or to call attention to certain undesirable traits and propensities. At the end of each term, cards containing the pupil's actual grades or marks are sent out.

The honor roll form used by the school is also intended to stimulate the best there is in the pupil. Scholarship, attendance, and punctuality are not made the sole requisites for getting on the roll of honor. It is the policy of the Tarboro Schools to "give honor to whom honor is due" and to recognize the merits of pupils who do their best. In keeping with this policy, pupils who manifest outstanding qualities, whether of scholarship, leadership, or school loyalty, are recommended for the honor roll. The following are typical examples: Mary Denson—high scholarship, perfect attendance and punctuality, commendable atti-